

Realistically, distributed networks can comprises millions of machines (each of which may have a plurality of endpoints) which are to be managed by thousands of control machines. The so-called control machines run Internet Protocol (IP) Driver Discovery/Monitor Scanners which poll the endpoints and gather and store status data, which is then made available to other machines and applications. Such a distributed networked system must be efficient or else the status communications alone will suffocate the network. A detailed discussion of distributed network services can be found in co-pending patent application, Serial No. 09/738,307, filed December 15, 2000, entitled "METHOD AND SYSTEM FOR MANAGEMENT OF RESOURCE LEASES IN AN APPLICATION FRAMEWORK SYSTEM", the teachings of which are herein incorporated by reference.

A network discovery engine for a distributed network comprises at least one IP driver. For vast networks, a plurality of distributed IP drivers are necessary, with each performing status and other communications for a subset of the network's resources. It is necessary to define a driver's scope in order to assure that status communications are not duplicative.

One of the types of communications which can clog a distributed network is the replication of data objects at a plurality of machines. While data object replication can facilitate local access to data when a distributed application is running, the proliferation of data objects can monopolize

one MAC address, IP Address. The control server 101a in accordance with the present invention has the components illustrated in Fig. 2 in addition to the distributed kernel services, for providing a method including the steps of: defining the network topology and physical scope for network devices; creating a logical network using the physical network topology; and, defining, storing, and applying the logical scope (i.e., application responsibility scope) for each application to be run in the network.

As shown in Fig. 2, the server 200 includes the already-available DKS core services at component 201, which services include the object request broker (ORB) 211, service manager 221, and the Administrator Configuration Database 231, among other standard DKS services. The DKS Internet Protocol Object Persistence (IPOP) Manager 203 provides the functionality for gathering network data, as is detailed in the co-pending patent application entitled "METHOD AND SYSTEM FOR MANAGEMENT OF RESOURCE LEASES IN AN APPLICATION FRAMEWORK SYSTEM", Serial No. 09/738,307, filed December 15, 2000, the teachings of which are incorporated by reference herein (Docket AUS9-2000-0699) and as further detailed below with reference to the detailed IPOP Driver of Fig. 3 and the flow chart of Fig. 4.

In accordance with the functionality of the DKS IPOP, endpoint data are gathered for use by the DKS Scope Manager 204, the functions of which are further detailed below. A Network